SD77-MSFC-2111

LISTING OF DATA SYSTEMS ELEMENTS AUTHORITIES

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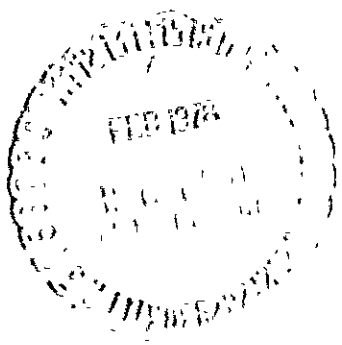

TELEDYNE BROWN ENGINEERING

Cummings Research Park• Huntsville, Alabama 35807

TECHNICAL REPORT

SD77-MSFC-2111

LISTING OF DATA SYSTEMS ELEMENTS AUTHORITIES

July 1977

Prepared For

DATA SYSTEMS LABORATORY
GEORGE C MARSHALL SPACE FLIGHT CENTER
MARSHALL SPACE FLIGHT CENTER, ALABAMA

Contract No. NAS8-31488

Prepared By

SYSTEMS DIVISION
TELEDYNE BROWN ENGINEERING
HUNTSVILLE, ALABAMA

ABSTRACT

NASA personnel have a need to be aware of and to interact with key technical experts in all areas of data systems. This report presents a partial listing (names, addresses and telephone numbers) of individuals known to be authorities in selected areas of data systems of interest to NASA. The listings are based primarily on recent publications by the named individuals.

APPROVED:

Olen Ely

Olen P. Ely
Project Director
NASA Projects

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INTRODUCTION

NASA personnel have a need to be aware of and to interact with key technical experts in all areas of technology. This need is particularly acute in the area of data systems where the volumes of data collected by NASA are expected to increase by orders of magnitude within the next five to fifteen years. This report presents a partial listing of authorities in key areas of data systems of interest to NASA. The listing begins with authorities in the area of space data storage and data handling and goes through final processing, dissimination and display. The report is organized to be compatible with the ten sections of a NASA data bank on end-to-end data systems, as follows:

- Section 1 - Data Generator Elements
- Section 2 - Space Data Processing Elements
- Section 3 - Space Data Storage Elements
- Section 4 - Space Data Handling Elements
- Section 5 - Space-To-Ground Communication Elements
- Section 6 - Preprocessing Elements
- Section 7 - Processing Elements
- Section 8 - Database Systems Elements
- Section 9 - Information Distribution Elements
- Section 10 - Information Presentation Elements

Sections 1 and 2 are to be provided as GFE and will appear in future updates to this report. Therefore, the listing begins with Section Section 3.

The listings were compiled primarily through references to recently published literature (technical and trade journals, conference proceedings, etc.) on specific aspects of data systems. Approximately one-half of the individuals listed were contacted and their areas of expertise verified. Several individuals have more than one area of expertise and may be found listed under more than one area of data systems. At the same time, other individuals may be expert in more areas than identified herein.

Listings are alphabetical within the area of interest. The name of each individual is followed by the area of expertise as it applies to the data systems elements under which it is listed Addresses and telephone numbers are provided in instances where these could be obtained.

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1. DATA GENERATOR ELEMENTS

Information is not available for Phase I.

2. SPACE DATA PROCESSING ELEMENTS

Information is not available for Phase I.

3. SPACE DATA STORAGE ELEMENTS

3. SPACE DATA STORAGE ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Bailey, R.F.	Bubble Memories	Rockwell International	Electronics Research Division 3370 Miraloma Avenue Anaheim, California 92803	(714) 632-8111
Besser, P.J.	Magnetic Bubble Memories	Rockwell International	3370 Miraloma Avenue Anaheim, California 92803	(714) 632-1163
Bessette, O.E.	Magnetic Recording	RCA	Front and Cooper Streets Camden, N J. 08102	(609) 963-8000
Bobeck, A.H.	Bubble Memory Devices	Bell Laboratories	600 Mountain Avenue Murray Hill, N.J. 07974	(201) 582-3288
Bonyhard, P.I.	Bubble Memory Devices	Bell Laboratories	600 Mountain Avenue Murray Hill, N.J. 07974	(201) 582-3288
Brobst, R.E.	Aerospace Tape Recorders	Odetics, Inc.	1859 S. Manchester Anaheim, CA. 92802	(714) 750-2111
Brown, E.T.	Magnetic Bubble Memories	Rockwell International	3370 Miraloma Avenue Anaheim, CA. 92803	(714) 632-3844
Burke, A M	Magnetic Recording	RCA	Front and Cooper Streets Camden, N J. 08102	(609) 963-8000

3. SPACE DATA STORAGE ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Chang, H.	Magnetic Bubble Domains for Memory Applications	IBM	Thomas J. Watson Research Center Box 218, Yorktown Heights, N.Y. 10598	(914) 945-3000
Chen, T.T.	Magnetic Bubble Memories	Rockwell International	Electronics Reserach Division 3370 Miraloma Avenue Ahaheim, CA. 92803	(714) 632-2231
Cohen, M.S.	High-Density Magnetic Bubble Devices	IBM	Thomas J. Watson Research Center P O. Box 218, Yorktown Heights 10598	(914) 945-3000
Felix, M.O.	Magnetic Recording Devices	AMPEX Corporation	401 Broadway Redwood City, CA 94063	(415) 367-2011
Fundingsland, O. M.	Thin-Film Recording Heads	Applied Magnetics Corporation	75 Robin Hill Road Goleta, CA 93017	(805) 964-4881
Furichi, S.	Magnetic Bubble Memories	Fujitsu Laboratories LTD	1015, Kamikodanaka, Nakaharaku Kawasaki, Japan 211	(N/A)
Gergis, I.S.	Magnetic Bubble Memories	Rockwell International	Electronics Research Division 3310 Miraloma Avenue Anaheim, CA. 92803	(714) 632-2231

3. SPACE DATA STORAGE ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Geusic, J.E.	Magnetic Bubble Memories	Bell Laboratories	600 Mountain Avenue Murray Hill, N J. 07974	(201) 582-3288
Hayes, J.M.	Magnetic Tape Recorders	NASA/GSFC	GSFC, Greenbelt, Maryland	N/A
Ho, C.P.	Magnetic Bubble Domains for Memory Applications	IBM	Thomas J. Watson Research Center P.O. Box 218, Yorktown Heights N.Y. 10598	(914) 945-3000
Hoagland, A.S.	Magnetic Media. Tape, Disk, Drums	IBM Research	Monterey & Cottle Road San Jose, CA. 95114	(408) 733-1661
Juliussen, J.E.	Memory Technologies, Distributed Processing, Computer Architecture	Texas Instruments, Inc.	P.O. Box 5474, MS 420 Dallas, Texas 75222	(214) 238-2760
Kaye, James	Magnetic Recording Devices	Ampex Corporation	401 Broadway Redwood City, CA. 94063	(415) 367-2503
Kiwimagi, R.G.	Coding, Magnetic Recording	International Business Machines Corporation	General Products Division Boulder, Colorado 80302	(303) 447-1900
Maegawa, H	Magnetic Bubble Devices	Fujitsu Laboratories LTD	1015, Kamikodawaka, Nakaharaku; Kawasaki, Japan 211	N/A

3. SPACE DATA STORAGE ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Mallinson, J.C.	Magnetic Recording	AMPEX Corporation	401 Broadway Redwood, CA. 94063	(415) 367-2011
McDowell, J.A.	Channel Coding for Digital Recording	IBM Corporation	General Products Division Boulder, Colorado 80302	(303) 447-1900
Mee, C.D.	Magnetic Recording	IBM Corporation	General Products Division Monterey & Cottle Road, San Jose, CA. 95193	(408) 227-7100
Muench, J	Aerospace Tape Recorders	Odetics, Inc	1859 S. Manchester Anaheim, CA 92802	(714) 750-2111
Oeffinger, T.R.	Magnetic Bubble Memories	Rockwell International	Electronics Research Division 3310 Miraloma Avenue Anaheim, CA. 92803	(714) 632-2231
Okada, M	Magnetic Bubble Memories	Fujitsu Laboratories LTD	1015 Kamkodanaka, Nakaharaku; Kawasaki, Japan 211	N/A
Ottesen, Hjalmar H.	Channel Coding for Digital Recording	IBM Corporation	General Products Division Boulder, Colorado 80302	(303) 447-1900
Putzrath, F.L.	Magnetic Tape Recording	RCA	Front Cooper Streets Camden, N.J. 08102	(609) 963-8000

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Saito, N.	Magnetic Bubble Devices	Hitachi, LTD	Central Research Laboratory Kokubunji, Tokyo, Japan	(---) 270-2111
Salzer, J.M.	Bubble Technology	Darling, Peterson and Salzer	1801 Avenue of the Stars/#1101 Los Angeles, CA 90067	(213) 879-0414
Smith, J.L.	Magnetic Bubble Memories	Bell Laboratories	600 Mountain Avenue Murray Hill, N.J. 07974	(201) 582-3288
Sugita, Y.	Magnetic Bubble Memories	Hitachi, LTD	Central Research Laboratory Kokubunji, Tokyo, Japan	(---) 270-2111
Takahashi, Kousuke	Memory System Design, Pattern Recognition System Design	Nippon Electric Company, LTD	Central Research Laboratory 4-1-1, Takatsu-Ku, Kawasaki, Japan 213	(044)855-1111 Ext. 2147
Takasu, M.	Magnetic Bubble Memories	Fujitsu Laboratories LTD	1015 Kamikodanaka, Nakaharaku, Kawasaki, Japan 211	N/A
Thompson, C.R.	Magnetic Tape Recorders	RCA	Front & Cooper Camden, N.J. 08102	(609) 963-8000
Toyooka, T.	Magnetic Bubble Memories	Hitachi, LTD	Central Research Laboratory Kokobunji, Tokyo, Japan	(---) 270-2111
Uber, P.	Magnetic Tape Recorders	Goddard Space Flight Center	Greenbelt, Maryland 20771	(301) 982-4123

3. SPACE DATA STORAGE ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Waggoner, B.A.	Magnetic Bubble Memories	Rockwell International	3370 Miraloma Avenue Anaheim, CA. 92803	(714) 632-8111
Waring, J.L.	Magnetic Recording	RCA	Front & Cooper Camden, N.J. 08102	(609) 963-8000
Wildmann, M.	Magnetic Recording	AMPEX Corporation	401 Broadway Redwood City, CA. 94063	(415) 367-2011
Yamagishi, K.	Magnetic Bubble Devices	Fujitsu Laboratories, LTD.	1015, Kamikodanaka, Nakaharaku, Kawasaki, Japan 211	(N/A)
Yoshizawa, S	Magnetic Bubble Devices	Hitachi, LTD.	Central Research Laboratory Kokubunji, Tokyo, Japan	(---) 270-2111
Ypma, J.E	Magnetic Bubble Devices	Rockwell International	3320 Miraloma Ave Anaheim, CA 92803	(714) 632-2716

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4. SPACE DATA HANDLING ELEMENTS

4. SPACE DATA HANDLING ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Abrahamsen, B.	Digital Communications Systems	The Norwegian Telecommunication Administration Research Establishment	University of Trondheim Norway	(N/A)
Burton, W.T.	High Rate Data Systems	Harris Corporation	325 W. Hibiscus Melbourne, Florida 32901	(305) 727-5885
DiMond, H.M.	High Speed Data Systems	TRW Defense and Space Systems Group	One Space Park, Redondo Beach, CA 90278	(213) 536-1977
Gardenhire, L.W.	Space Data Handling, Data Collection	Private Consultant	906 Whitmire Drive Melbourne, Florida 32935	(305) 254-4369
Giri, R.	High Rate Data Systems	Harris Corporation	325 West Hibiscus Melbourne, Florida 32901	(305) 727-5085
Goodwin, J.E.	Data Handling Systems and Techniques	Martin Marietta Aerospace	Electronics Department Box 179/MC 0202 Denver, Colorado 80201	(303) 979-7000
Hakimogula, D.	Digital Data Handling Systems	Aydin Vector	401 Commerce Drive, Fort Washington, PA. 19034	(215) 646-8100
Holte, Nils	Digital Communi-cations Systems	Electronic Research Laboratory	University of Trondheim Norway	(N/A)

4. SPACE DATA HANDLING ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Liechti, Charles	Semi-conductor Devices	Hewlett-Packard	1501 Page Mill Road Palo Alto, CA. 94304	(415) 493-1501
Matheson, W.L.	High Rate Data Systems	Harris Corporation	325 W. Hibiscus Melbourne, Fla 32901	(305) 727-5094
Maunsell, H.I.	Digital Multi-plexers	Bell Laboratories	Box 400 Holmdel, N J. 07733	(201) 949-3000
McGary, John	Space Data Handling Systems, Multi-plexers	SCI Systems, Inc.	8600 Memorial Parkway, SW Huntsville, Alabama 35802	(205) 881-1611
Giles, J.	High Speed Computations, Linear Devices	Advanced Micro-Devices	901 Thomspon Place Sunnyvale, CA. 94086	(408) 732-2269
Pruss, Hugh	Space Data Handling Systems	Teledyne Telemetry	1901 S. Bundy Drive Los Angeles, CA. 90025	(213) 478-0211
Robrock, R.B.	Digital Communi-cations Systems	Bell Laboratories	Box 400; Holmdel, New Jersey 07733	(201) 949-3000
Roste, Terje	Digital Communi-cations Systems	Electronic Research Laboratory	University of Trondheim, Norway	(N/A)

4. SPACE DATA HANDLING ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Scharff, A.	High Rate Data Handling	Motorolla	Scottsdale, Arizona 85252	(602) 949-2277
Spaide, W.	High Rate Data Systems Device Technology	Air Force Avionics Lab.	Wright Patterson AFB	(513) 255-2459
Trevathan, Charles	Data Handling Systems Technology	Goddard Space Flight Center	Greenbelt, Maryland 20771	(301) 982-4123
Tuyl, Rory Van	Semi-conductor Devices	Hewlett-Packard	1501 Page Mill Road, Palo Alto, CA. 94304	(415) 493-1501
Valachovic, R.	High Speed Analog-to-Digital Converters	IBM	IBM-Federal Systems Division, Owego, N.Y.	(607) 687-2121 (ext. 3625)
von Roesgen, C.A.	Digital Communi-cations Systems	Bell Laboratories	Box 400, Holmdel, N.J. 07733	(201) 949-3000
Waggener, W.N.	Multiplexers and Decommutators	EMR Telemetry	Box 3041, Sarasota, Fla. 33578	(813) 371-0811

5. SPACE-TO-GROUND COMMUNICATIONS ELEMENTS

5. SPACE-TO-GROUND COMMUNICATION ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Amoroso, S	Receivers	Norden Division-United Technology Corporation	Norwalk, Connecticut	(N/A)
Anderson, N. C.	ARC Lamp Technology/ High Temperature Materials Technology	ILC Technology Company	164 Commeroial Avenue Sunnyvale, California 94086	(408) 738-2944
Atai, A. E.	RF Filter Technology	COSMAT Labs	Clarksburg, Maryland 20734	(301) 428-4000
Baertsch, R. D.	Detection and Discrimination Devices	General Electric Corporate Research and Development	Schenectady, N. Y. 12301	(518) 385-8134
Baghdady, E. J.	Modulation Techniques,	INFO SYSTEMS, Inc.	30 Grant Street Waltham, Massachusetts 02154	(617) 894-4321
Berson, B.	Microwave Semiconductors	Hewlett-Packard Company	1501 Page Mill Road Palo Alto, California 94304	(415) 493-1501
Bierig, R. W.	Microwave Power	Raytheon Research Division	130 Second Avenue Waltham, Massachusetts 02154	(617) 890-8080
Boothe, K B.	Satellite Terminals	Microdyne Corporation	P. O. Box 1527 Rockville, MD 20850	(301) 762-8500
Camisa, R. L.	RF Components	RCA Laboratories	David Sarnoff Research Center Princeton, N. J 08540	(N/A)

5. SPACE-TO-GROUND COMMUNICATION ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Crispin, H. L.	Satellite Communications	Scientific-Atlanta, Incorporated	3845 Pleasant Dl Rd Atlanta, Georgia 30340	(404) 449-2000
Cuccia, C. L.	Satellite Communications	Ford Aerospace and Communications	Western Development Labs Palo Alto, California 94302	(415) 494-7400
Degnan, John J.	Waveguide Lasers; Optical Antennas, Optical Resonators	NASA Goddard Space Flight Center	Greenbelt, Maryland 20771	(301) 474-9000
Ditullio, J. G.	Antenna Systems	G. T. E. Sylvania	ESG Eastern Division Needham Heights, Massachusetts 02194	(617) 449-2000
Fadley, D. L.	Hi Data Rate Lasers	Motorola, Inc	Govt. Elect. Division 8201 E. McDowell Road Scottsdale, Arizona 85251	(602) 949-2603
Flattau, T.	CO_2 Laser Heterodyne Receivers	Cutler-Hammer, Inc.	AIL Division Comac Road Deer Park, New York 11728	(516) 595-5000
Forster, D. C.	Hi Data Rate	Hughes Research Laboratories	P. O. Box 92919 Bldg. 390/Mail Station 3180 Los Angeles, California 90009	(213) 648-3428
Fulton, F. F.	Low Noise Receivers	Avantek	3175 Bowers Avenue Santa Clara, California 95051	(408) 249-0700 Ext. 200
Goodwin, F. E.	Infrared-Laser Communications Systems	Hughes Aircraft Company	Space & Communications Group 2060 E. Imperial Highway El Segundo, California 90245	(213) 648-2345

5. SPACE-TO-GROUND COMMUNICATION ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Gregorwich, W. S.	Antenna Systems/ Phased Arrays	Philco-Ford Corporation	Western Development Laboratories Palo Alto, California 94302	(415) 494-7400 (Ext 5165)
Greene, E. P.	Coding, Data Management, Error Modeling	NASA Goddard Space Flight Center	Greenbelt, Maryland 20771	(301) 982-4123
Hellman, Carl	Satellite Communications	Ford Aerospace and Communication	WDL, Palo Alto, California 94302	(415) 494-7400
Henderson, D. Michael	Wideband-Modulation at Ten Microns/CO_2 Laser Transmitters	Hughes Aircraft Company	Space & Communications Group 2060 E. Imperial Highway El Segundo, California 90245	(213) 648-2345
Herring, R. B.	Receivers	Galamar Industries A Subsidiary of Applied Materials, Incorporated	Palo Alto, California	(N/A)
Hines, M. E.	Airborne Transmitters	Varian Associates	611 Hansen Way Palo Alto, California 94303	(415) 493-4000
Hitch, B F.	RF Components	RCA Government Communications and Automated Systems Division	Camden, New Jersey 08102	(609) 963-8000
Jacobs, Ira	Lightwave Communications	Bell Laboratories	Wideband Transmission Facilities Lab Crawfords Road Holmdel, New Jersey 07733	(201) 949-3000

5. SPACE-TO-GROUND COMMUNICATION ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Johnson, E. H.	High Data Rate Laser Communications Systems for Space Applications	NASA Goddard Space Flight Center	Greenbelt, Maryland 20771	(301) 474-9000
Krumm, C F.	Receivers	Raytheon Company	Research Division Waltham, Massachusetts 02154	(617) 899-8400
Lee, D. H.	Impatt Diodes	Torrance Research Center	Hughes Aircraft Company 3100 West Lomita Boulevard Torrence, California 90509	(213) 534-2121
Lepoff, J.	Receivers	Hewlett-Packard	Microwave-Semiconductor Division 3172 Porter Drive Palo Alto, California 94304	(415) 493-1501
Limb, J. O.	Coding Techniques & Relay Systems	Bell Laboratories	Crawfords Road Holmdel, New Jersey 07733	(201) 949-3000
Maloney, E. D.	Microwave Power Sources	Thomson-CSF	Electron Tube Division Paris, France	*** 907-7733
Marx, D H.	Surveillance Systems & Direction Finding	Ocean Systems Center	Atten. Code 723 San Diego, California 92152	(714) 225-7170
Masse, D. J.	Receivers	Raytheon Company	Research Division Waltham, Massachusetts 02154	(617) 899-8400
Mazo, J. E.	Optical Transmission Technology	Bell Laboratories	Room 20377 600 Mountain Avenue Murray Hill, New Jersey 07974	(201) 582-3288

5. SPACE-TO-GROUND COMMUNICATION ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
McAvoy, N.	Submillimeter Sources	NASA Goddard Space Flight Center	Greenbelt, Maryland 20771	(301) 474-9000
McEliece, R J.	Coding Theory, Data Compression, Error-Correction Codes	Jet Propulsion Laboratory	4800 Oak Grove Drive Pasadena, California 91109	(213) 354-7058
McElroy, J. H.	Laser-Induced Ionization of High-Pressure Gases	NASA Goddard Space Flight Center	Greenbelt, Maryland 20771	(301) 474-9000
Moody, H. J.	Airborne Antennas	RCA Ltd.	P. O. Box 700 STE Anne De Bellevue PQ, Canada H9X3L3	(***) *88-5444
Mueller, O	Semiconductor Technology, Communications	General Electric Co. MRD.	Room 2431 Mountain View Road Lynchburg, Virginia 24502	(804) 846-7311 Ext. 2333
Nussmeier, T. A.	Space-Borne Applications of Heterodyne Laser Systems	Hughes Aircraft Co.	Space & Communication Group El Segundo, California 90245	(213) 534-2121
Osepchuk, J. M.	Microwave Power Sources	Raytheon Research Division	20 Seyon Street Waltham, Massachusetts 02154	(617) 899-8400
Parad, L. I.	Antenna Systems	G.T E. Sylvania	ESG Eastern Division Needham Heights, Massachusetts 02194	(617) 449-2000
Peyton, Bernard J.	Coherent & Incoherent Infrared Receivers	Cutler-Hammer, Inc.	AIL, Comac Road Deer Park, New York 11728	(516) 595-5000

5. SPACE-TO-GROUND COMMUNICATION ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Pitzalis, O, Jr.	Microwave Semiconductors	U. S. Army Electronics Command	Electronics Technology and Devices Laboratory Fort Mammouth, New Jersey 07703	(201) 532-9000
Posner, R. S.	Transmitters	Varian Associates	611 Hansen Way Palo Alto, California 94303	(415) 493-4000
Pucel, R. A.	Receivers	Raytheon Company	Research Division Waltham, Massachusetts 02154	(617) 899-8400
Quan, Wasson	Satellite Communications	Ford Aerospace and Communications	Western Development Labs Palo Alto, California 94302	(415) 494-7400
Richter, E W.	ECM & Radar Systems, Automatic Test Equip, Magnetrons & Klystrons	RCA	Govt. Comm. & Automated Systems Burlington, Massachusetts 01803	(617) 272-4000 Ext. 2716
Ross, M.	Space Laser Communications	McDonnell-Douglas Astronautics-East	E-O Group P. O. Box 516 St. Louis, Missouri 63166	(314) 232-7566
Rubinstein, C. B.	Coding Techniques and Relay Systems	Bell Laboratories	Crawfords Road Holmdel, New Jersey 07733	(201) 949-3000
Salz, J.	Optical Transmission Technology	Bell Laboratories	Crawfords Road Holmdel, New Jersey 07733	(201) 949-6786
Schoeck, K. O.	Wideband Recording Techniques/Telemetry	DOTO Space and Missile Test Center	Vandenburg AFB, California 93437	(805) 866-5626
Schram, J. L.	Transmitters/Traveling Wave Tubes	Watkins-Johnson	333 Hillview Avenue Palo Alto, California 94304	(415) 493-4141

5. SPACE-TO-GROUND COMMUNICATION ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Shkarofsky, I.P.	Airborne Antennas	RCA Ltd.	P. O. Box 700 STE Anne De Bellevue PQ, Canada H9X3L3	*** *88-5444
Skingley, B. S.	RF Communications Systems	Marconi Communications Systems LMTD	Tropospheric Scatter Modems Development Chelmsford, Essex, England	(N/A)
Sommers, D. J.	Antenna Systems	GTE Sylvania	ESG Eastern Division Needham Heights, Massachusetts 02194	(617) 449-2000
Stokes, Lyle S.	Microwave Transmission Systems	Hughes Aircraft Co.	Space & Communication Group El Segundo, California 90245	(213) 534-2121
Sweet, A. A.	Airborne Transmitters	Varian Associates	611 Hansen Way Palo Alto, California 94303	(415) 493-4000
Thompson, C. R.	Wideband Recording Techniques/Submarine Communications	RCA Govt. Comm & Automated Systems Division	Front & Copper Streets Camden, New Jersey 08102	(609) 963-8000 Ext PC5327
Thrower, W. F.	Impatt Diodes	Torrance Research	Hughes Aircraft Company 3100 West Lomita Boulevard El Segundo, California 90509	(213) 534-2121
Tompsett, M. F.	CCD , Analog-Digital LSI	Bell Laboratories	600 Mountain Avenue Murray Hill, New Jersey 07974	(201) 582-4454
Weeks, W. L.	Antenna Systems & Propogation	Purdue University	Electrical Engineering Dept W. Lafayette, Indiana 47907	(317) 493-9466

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5. SPACE-TO-GROUND COMMUNICATION ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Weller, K. P.	Impatt Diodes	Torrance Research Center	Hughes Aircraft Company 3100 West Lomita Blvd. Torrance, California 90509	(213) 534-2121
Williams, A E.	Airborne Transmitters	Cosmat Laboratories	Clarksburg, Maryland, 20734	(301) 428-4000
Wu, W. W.	Digital Satellite Communications	Cosmat Laboratories	Clarksburg, Maryland, 20734	(301) 428-4213

6. PREPROCESSING ELEMENTS

6. PREPROCESSING ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Abernathy, J. L.	High Rate Data Systems	McDonnell Douglas Astronautics Co.	P. O. Box 516 St. Louis, Mo. 63166	(314) 232-7566
Arter, N. K.	Mass Data Storage Systems	IBM Corporation	P. O Box 1900 Boulder, Colorado 80314	(303) 447-1900
Bessette, O. E.	Magnetic Recording Devices	RCA	Front and Cooper Streets Camden, N. J. 08102	(609) 963-8000
Fadley, D. L.	High Data Rate Laser Communications	Motorola, Inc.	Govt. Elect. Division 8201 E. McDonell Rd. Scottsdale, Arizona 85251	(602) 949-2603
Felix, M. O	Magnetic Recording Devices	Ampex Corporation	401 Broadway Redwood City, Ca. 94063	(415) 367-2011
Goodwin, J. E.	Data Handling Systems and Techniques	Martin Marietta Aerospace	Electronics Dept. Box 179/MC0202	(303) 979-7000
Grey, J. S	High Rate Data Systems Ground Stations	Harris Corporation	325 W Hibiscus Melbourne, Florida 32901	(305) 727-5233
Hakimogula, Demurhon	Digital Data Handling Systems	Aydin Vector	401 Commerce Dr. Fort Washington, Pa. 19034	(215) 646-8100

6. PREPROCESSING ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Harris, J. P.	Mass Data Storage Systems	IBM Corporation	P. O. Box 1900 Boulder, Colorado 80314	(303) 447-1900
Ramult, J.	Magnetic Recording Devices	Bell & Howell-Datatape Div.	300 Sierra Madre Villa Pasadena, California 91109	(213) 796-9381 Ext. 2244
Rohde, R. S.	Mass Data Storage Systems	IBM Corporation	P. O. Box 1900 Boulder, Colorado 80314	(303) 447-1900
Schoeck, K. O.	Instrumentation Tape Recorders - Telemetry Receiving Equipment	Space & Missile Test Center	Vandenberg, AFB, Ca. 93437	(805) 866-5626
Waggener, W. N.	Multiplexers and Decommutators	EMR Telemetry	Box 3041 Sarasota, Florida 33578	(813) 371-0811

7. DATA PROCESSING ELEMENTS

7. DATA PROCESSING ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Adams, C.	Semiconductors and Micro-Electronics	Hellpot Division of Beckman Instruments	2500 Harbor Blvd. Fullerton, California 92634	(714) 871-4848
Arntz, F. O.	Electron Beam Memories	Micro-Bit Corporation	40 Harwell Ave. Lexington, Ma, 02173	(N/A)
Bell, C. G	Minicomputers, Super-Scale Computers	Carnegie-Mellon University	Schenley Place Pittsburgh, Pa. 15218	(412) 621-2600
Boysel, Lee	Minicomputers, MOS Memories	Four-Phase Systems	19333 Vallco Parkway Cupertino, California 95014	(408) 255-0900
Bremer, J. W.	Semiconductor Memories, Magnetic memories, Computer Logic	Honeywell Information Systems	2600 Ridgeway Pkwy. Minneapolis, Minnesota	(612) 378-5363
Brown, Richard	Laser Memories	NASA Ames Research Center	Moffett Field, Ca. 94035	(N/A)
Chen, Robert	Minicomputers, Super-Scale Computers	Carnegie-Mellon University	Schenley Place Pittsburgh, Pa. 15218	(412) 621-2600
Clover, R. B.	Semiconductor Memories	Hewlett Packard	1501 Page Mill Road Palo Alto, California	(415) 493-1501

7. DATA PROCESSING ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Doi, Katsuyuki	Minicomputers, Computer Logic	Toshiba Research and Development Center	Kawasaki, Japan 210	(04) 452-2111
Ellis, G. W.	Electron Beam Memories	General Electric Company	Schenectady, New York 12301	(518) 385-2211
Feth, G. C.	Memory/Storage Systems	IBM Thomas J. Watson Research Center	P. O. Box 218 Yorktown Heights, New York, 10598	(914) 945-3000
Frankel, H. D.	Memory Technology	Mitre Corporation	Westgate Research Park McLean, Virginia 22101	(703) 790-6000
Fundingsland, O. M.	Magnetic Memories	Applied Magnetics Corporation	75 Robin Hill Road Goleta, California 93017	(805) 964-4881
Goedde, Geoff	Large-Scale Computers	Amdahl Corporation	1250 East Arques Ave. Sunnyvale, Ca 94086	(408) 735-4132
Greenberg, Jay	Large-Scale Computers	Amdahl Corporation	1250 East Arques Ave. Sunnyvale, California 94086	(408) 735-4011
Harte, K. J.	Electron Beam Memories	Micro-Bit Corporation	40 Harwell Ave. Lexington, Ma 02173	(N/A)

7. DATA PROCESSING ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Henle, R. A.	Semiconductor Memories Computer Logic	IBM Systems Products Division	East Fishkill Hopewell Junction, New York	(914) 463-1234
Ho, Irving	Semiconductor Memories Computer Logic	IBM Systems Products Division	East Fishkill Hopewell Junction, New York	(914) 463-1234
Hodges, D. A.	Semiconductor Memories, Computer Logic, Minicomputers, Magnetic memories	University of California	Dept. of Electrical Engineering and Computer Science Berkeley, California 94720	Inf Operator (415) 642-6000
Horiuchi, Schigeharu	Minicomputers Computer Logic	Toshiba Research and Development Center	72 Mofikawa-Cho Kawasaki, Japan 210	(04) 452-2111
House, D.	Memory Systems	Intel Corporation	3065 Bowers Ave. Santa Clara, California	(415) 246-7501
Hughes, W. C.	Electron Beam Memories	General Electric Company	Corporate Research and Development Center Schenectady, New York 12301	(518) 385-2211
Jasper, D. P.	Minicomputers	Control Data Technovec	P. O. Box 0 Minneapolis, Minnesota 55440	(612) 853-5820

7. DATA PROCESSING ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Johnson, William S.	Computer Logic Semiconductor Memories	Motorola, Inc.	4221 E. Raymond Phoenix, Arizona 85040	(602) 244-3208
Jones, Ken	Core Memories	Ampex Corp.	401 Broadway Redwood City, Ca. 94063	(415) 367-2011
Kaye, James H.	Mass Storage Systems	AMPEX Corporation	401 Broadway Redwood City, California 94063	(415) 367-2503
Koudela, J., Jr.	Minicomputers	Varian Data Machines	611 Hansen Way Palo Alto, California 94303	(415) 591-1710
Lecht, C. P.	Large-Scale Computers	Advanced Computer Techniques Corp.	N/A	(N/A)
Lemmond, C. Q.	Electron Beam Memories	General Electric Company	Schenectady, New York	(518) 385-2211
Lim, Raymond S.	Super-Scale Computers, Laser Memories	NASA Ames Research Center	Moffett Field, Ca. 94035	(415) 965-5189
Lynch, A.	Minicomputers and Distributed Processing	Data General Corporation	C&L Park Dr. Southboro, Mass. 01772	(617) 485-9100

7. DATA PROCESSING ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Martin, P. J.	Distributed Processing	US Department of Agriculture	Office of Automated Data Systems	(202) 655-4000
Martin, R R.	Memory Technology	The Mitre Corp.	Westgate Research Park McLean, Virginia 22101	(703) 790-6000
Molloy, Hank	Microprocessors Semiconductor Memories	Intel Corp	3065 Bowers Avenue Santa Clara, California 95051	(408) 246-7501
Myers, Ware	MOS Memories Microprocessors Bubble Memories Electron Beam Memories	Xerox Corporation	Data Systems Division 701 S. Aviation El Segundo, Ca. 90245	(213) 679-4511
Naden, R. A.	Semiconductor Memories	Texas Instruments	13500 N. Central Expressway Dallas, Texas 75204	(214) 238-2011
Noyce, R N.	Semiconductor Memories Computer Logic Microprocessor	Intel Corporation	3065 Bowers Avenue Santa Clara, Ca. 95051	(408) 246-7501
Parks, H. G.	Electron Beam Memories	General Electric Company	Schenectady, New York	(518) 385-2211

7. DATA PROCESSING ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Pederson, R. A.	Bipolar LSI Structures and Circuits, Computer Logic	Bell Telephone Laboratories	Allentown, Pennsylvania	(N/A)
Peterson, Chris	MOS Memories, Computer Logic	Fairchild Semiconductor	M.S. 20-2733 464 Ellis St. Mountain View, Ca. 94042	(415) 962-4488 or 962-3941
Pohm, A. V.	Semiconductor and Magnetic Memories	Iowa State University	Wallace & Union St. Ames, Iowa 50010	(515) 294-5280
Possin, G. E.	Electron Beam Memories	General Electric Company	Schenectady, New York	(518) 385-2211
Pricer, W. David	Semiconductor Memories, Core Memories	IBM Systems Products Division	Burlington, Vermont	(N/A)
Quinn, M. J.	Super-Scale Computers	NASA JSC	Houston, Texas 77058	(713) 483-4717
Rallapalli, Kris	Computer Logic Bipolar Memories	Fairchild Semiconductor	464 Ellis Street Mountain View, California 94042	(N/A)

7. DATA PROCESSING ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Rege, Sattish	Minicomputers, Super-Scale Computers	Carnegie-Mellon University	Schenley Place Pittsburgh, Pennsylvania 15218	(412) 621-2600
Schmid, H.	Microprocessors	General Electric Company	P. O. Box 5000 Binghampton, New York 13902	(607) 729-2511
Shibata, Tadashi	Minicomputers Computer Logic	Toshiba Research and Development Center	72 Mofikawa-Cho Kawasaki, Japan 210	(04) 452-2111
Speliotis, D. E.	Memory Technology	Micro-Bit Corporation	40 Harwell Avenue Lexington, Massachusetts 02173	(N/A)
Theis, D. J.	Minicomputers Super-Scale Computers	Aerospace Corporation	(N/A)	(N/A)
Tompsett, M. F.	CCD Memories	Bell Laboratories	Murray Hill, New Jersey 07974	(201) 582-4451
Trick, Robert M.	Disk Storage	Ampex Corporation	401 Broadway Redwood City, California 94063	(415) 367-2203
Tucker, A. B., Jr.	Super-Scale Computers	Georgetown University	Academic Computation Center Washington, D. C. 20057	(202) 625-4338

7. DATA PROCESSING ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Verhofstadt, P.W.J.	MOS Memories Computer Logic Microprocessors	Fairchild Semiconductor	464 Ellis Mountain View, California 94040	(415) 962-5011
Walsh, James L.	Computer Logic	IBM Systems Products Divison	East Fishkill Hopewell Junction, New York	(914) 463-1234
Whittier, R. J.	Semiconductor Memories	INTEL Corporation	3065 Bowers Avenue Santa Clära, California	(415) 246-7501
Wilson, R. H.	Electron Beam Memories	General Electric Co.	Schenectady, New York 12301	(518) 385-2211
Wirsching, J. E.	Microprocessors Distributed Processing	Consultant	3364 Marina Avenue Livermore, California 94550	(N/A)
Withington, F. G.	Microprocessors Minicomputers Large-Scale Computers Magnetic Memories	Arthur D. Little, Inc.	25 Acorn Park Cambridge, Massachusetts 02140	(617) 864-5770
Yamazaki, Isamu	Minicomputers Computer Logic Microprocessors	Toshiba Research and Development Center	72 Mofikawa-Cho Kawasaki, Japan 210	(04) 452-2111

7. DATA PROCESSING ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Yoshida, K.	Minicomputers Computer Logic	Toshiba Research and Development Center	72 Mofikawa-Cho Kawasaki, Japan 210	(04) 452-2111
Ypma, John E.	Bubble Memory	Rockwell International	3370 Miraloma Avenue Anaheim, California 92803	(714) 632-2716

8. DATA BASE SYSTEM ELEMENTS

8. DATA BASE SYSTEM ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Bachman, C.	Data Base Management Message Management Software Engineering	Honeywell Information Systems	300 Concord Road Billerica, Massachusetts 01821	(617) 667-3111 Ext. 2256
Baum, Richard	Data Base Management	Ohio State University	2024 Neil Avenue Columbus, Ohio 43210	(614) 422-3083
Berg, J.	DBMS, Privacy Issues Programming Languages	National Bureau of Standards	Institute for Computer Science and Technology Tech A-265 Washington, D. C. 20234	(301) 921-3861
Braddock, Fred	Data Base Management Software Products	Informatics, Inc.	21050 Van Owen Street Canoga Park, California 91303	(213) 887-9121
Brewer, S.	Data Base Management DBMS Technology Distributed Systems Technology	Honeywell, Inc.	2222 W. Peoria Avenue Phoenix, Arizona 85029	(602) 943-2341 Ext. 738
Broadwin, E. B.	Programming Languages Data Base Management	Computer Sciences Corporation	650 N. Sepuluda Boulevard El Segundo, California 90245	(213) 678-0311 Ext. 1312
Curtice, R. M.	Data Base Management Systems	Arthur D. Little, Inc.	25 Acorn Park Cambridge, Massachusetts 02140	(617) 864-5770

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8. DATA BASE SYSTEM ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Deutsch, D. R.	Set Theoretic DBMS DBMS Requirements Analysis & Design Approach	National Bureau of Standards	Institute for Computer Sciences & Technology Tech A-367 Washington, D. C. 20234	(301) 921-3491
Dodd, G.	Data Bases, Computer Graphics, AI Operating Systems	General Motors Research Labs	Warren, Michigan 48092	(313) 575-3203
Dyke, R. F.	Data Base Administration, Management Information Systems	U. S. Civil Service Commission	1900 East Street, NW Washington, D. C. 20415	(202) 254-8887
Ehrlich, J. L.	DBMS, On-Line Transaction Systems Data Base Distributed Processing	General Electric	260 Long Ridge Road Stamford, Connecticut 06902	(203) 357-4634
Fife, D.	Computer Software Management, Evaluation of Data Base Systems	National Bureau of Standards	Tech A-367 Washington, D. C. 20234	(301) 921-3491
Fitzgerald, T.	EDP Auditing, Data Base Systems, On Line Real Time Systems	Manufacturers Hanover Trust	4 New York Plaza New York, New York 10015	(212) 623-3953

8. DATA BASE SYSTEM ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Fong, Elizabeth	DBMS, Programming Languages, Software Engineering	National Bureau of Standards	Tech Building A-367 Washington, D. C. 20023	(301) 921-3491
Frank, R. L.	Data Base System Architecture, Data Base Models, Data Communications	University of Utah	Computer Science Department St. Lake City, Utah	(801) 581-8378
Goldstein, R. C.	Data Base Management Computers & Privacy	University of British Columbia, Faculty of Commerce	2075 Westbrook Place Vancouver, Canada V6T-1W5	(604) 228-6565
Hollander, A. W.	DBMS, EDP Auditing	Cullinane Corporation	Wellesley Office Park 20 William Street Wellesley, Massachusetts 02181	(617) 237-6600
Hsiao, David K.	Data Base Management Systems, Data Security Data Base Machines	Ohio State University	2024 Neil Avenue Columbus, Ohio 43210	(614) 422-3083
Iwanski, J. A.	Data Base Management Software, Software Engineering	Mobile Oil Corporation	150 East 42nd Street New York, New York 10017	(212) 883-4698

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8. DATA BASE SYSTEM ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Lochovsky, E. F.	User Performance Evaluation, DBMS Architecture	University of Toronto	Dept. of Computer Science Toronto, Canada M5S-1A7	(416) 978-8725
O'Connell, M. L.	Language Design & Codasyl Models	Digital Equipment Corporation	146 Main Street Maynard, Massachusetts 01754	(617) 897-5111 Ext. 5170
Sibley, E.	DBMS, Data Administration, Distributed Systems	University of Maryland	Dept. of Inf. Systems Management College Park, Maryland 20742	(301) 454-3027 or 454-2548
Stonebraker, M. R.	Data Base Management	University of California	EECS Dept Berkley, California 94720	(415) 642-5807
Swanson, T. E.	Information Management in the Public Sector, Privacy-Open Records	State of Iowa	Lucas State Office Building Des Moines, Iowa 50319	(515) 281-5484
Turn, R.	Data Processing Systems Technology Forecasting	Rand Corporation	1700 Main Street Santa Monica, California 90406	(213) 393-0411
Yao, S. B.	Data Base Access Cost Analysis, Control of Concurrent Accesses	Purdue University	Computer Science Department W. Lafayette, Indiana 47907	(317) 494-8566

9. INFORMATION DISTRIBUTION ELEMENTS

9. INFORMATION DISTRIBUTION ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Abrahamsen, Bjorn	Digital Communications Systems	Norwegian Telecommunications Administration Research Establishment	University of Trondheim, Norway	(N/A)
Ash, E. A.	Telecommunications	University College London	Dept. of EE Torrington Place, London	(01) 387-7050 Ext. 595
Browne, S.	Multiplexing	Carrier Telephone Corporation of America, Inc.	5720 Columbia Pike Falls Church, Virginia 22041	(703) 578-4200
Burns, J. Christopher	Communications Systems	Arthur D. Little Corporation	Information Systems Division 25 Acorn Park Cambridge, Massachusetts, 02140	(617) 864-5770
Cody, James	Software	Applied Communications, Inc.	Omaha, Nebraska	(N/A)
Collier, M. E.	Fiber Optics	Standard Communications Laboratories, LTD.	Harlow, Essex, England	(N/A)
Crispin, Howard L.	Satellite Communications Systems	Scientific-Atlanta, Inc.	3845 Pleasant D Road Atlanta, Georgia 30340	(404) 449-2000
Cuccia, Louis	Satellite Communications	Ford Aerospace and Communications	Western Development Laboratories Palo Alto, California 94302	(415) 494-7400

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9. INFORMATION DISTRIBUTION ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
DeMent, Ralph E.	Digital Communications Systems	Digital Equipment Corporation	146 Main Street Maynard, Massachusetts 01754	(617) 897-5111
Doll, Dixon R.	Digital Communications Systems	DMW Telecommunications Corporation	Ann Arbor, Michigan	(N/A)
Forney, G. David	Multiplexing	Codex Corporation	15 Riverdale Avenue Newton, Massachusetts 02195	(617) 969-0600
Frank, Howard	Data Communications Network Analysis, Testing, Planning & Design	Network Analysis Corporation	Beachwood/Old Tappan Road Glen Cove, New York 11542	(516) 571-9580
Gallawa, R. L.	Guided Waves, Optical Communications	U. S. Department of Commerce	Office of Telecommunications, Institute of Telecommunications Sciences Boulder, Colorado 80302	(N/A)
Gould, R. G.	Satellite Communications	Satellite Systems Engineering, Inc.	7315 Wisconsin Avenue Washington, D. C. 20014	(N/A)
Held, Gilbert	Digital Communications Systems	U. S. Civil Service Commission	Macon, Georgia	(N/A)

9. INFORMATION DISTRIBUTION ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Hellman, Carl	Satellite Communications	Ford Aerospace and Communication	WDL Palo Alto, California 94302	(415) 494-7400
Holte, Nils	Digital Communications Systems	Electronic Research Laboratory	University of Trondheim Norway	(N/A)
Hovey, Richard B.	Digital Communications Systems	Telenet Communications Company	1050 17th Street, N. W. Washington, D. C. 20036	(202) 637-7900
Innes, D. R.	Operating Systems Data Communications, Lab Automation	University of Liverpool	P. O. Box 147 Liverpool, England L693BX	(051) 709-6022
Jacobs, Ira	Fiber Optics	Bell Laboratories	Wideband Transmission Facilities Lab Holmdel, New Jersey, 07733	(201) 949-3000
Johnson, Timothy	Digital Communications Systems	Consultant	London, England	(N/A)
Kallis, Stephen A., Jr.	Computer-Based Networks	Digital Equipment Corporation	146 Main Street Maynard, Massachusetts 01754	(617) 897-5111

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NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Kao, C. K.	Fiber Optics Telecommunications	ITT	Electro-Optical Products Division 7635 Plantation P. O. Box 7065 Roanoke, Virginia 24019	(703) 563-0371
Kleinrock, Leonard	Digital Communications Networks	University of California	Department of Computer Science UCLA Los Angeles, California 90049	(213) 678-0311
Krakauer, C.	Microprocessor Controlled Equipment, Network Processors	Codex Corporation	15 Riverdale Avenue Newton, Massachusetts 02195	(617) 969-0600 Ext. 655
Kretzmer, E. R.	Telecommunications Equipment	Bell Laboratories	Holmdel, New Jersey 07733	(201) 949-3000
Lum, Y. F.	Satellite Communications	Bell Northern Research	P. O. Box 3511 Post Station "C" Ottawa, Canada, K1Y4H7	(613) 596-2210
Maunsell, H. I.	Digital Communications Systems	Bell Laboratories	Box 400 Holmdel, New Jersey 07733	(201) 949-3000
McKenzie, A. A.	Packet-Switched Computer Networks & Communications Protocols	Bolt Beranek & Newman, Inc.	50 Moulton Street Cambridge, Massachusetts 02138	(617) 491-1850 Ext 441

9. INFORMATION DISTRIBUTION ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Miller, Stewart E.	Devices for Transmission in the Optical Region	Bell Laboratories	Guided Wave Research Group Holmdel, New Jersey 07733	(201) 949-3000
Pfyffer, H. J.	Digital Communications Systems	PTT Research Laboratories	Berne, Switzerland	(N/A)
Pritchard, Wilburn	Satellite Communications	Satellite Systems Engineering, Inc.	Washington, D. C. 20014	(N/A)
Quan, Wasson	Satellite Communications	Ford Aerospace and Communications	Western Development Laboratories Palo Alto, California 94302	(415) 494-7400
Robrock, R. B.	Digital Communications Systems	Bell Laboratories	Holmdel, New Jersey 07733	(201) 949-3000
Roste, Terje	Digital Communications Systems	University of Trondheim, Norway	Electronic Research Laboratory University of Trondheim Norway	(N/A)
Rubin, P. E.	Digital Communications Systems	Bell Laboratories	Holmdel, New Jersey 07733	(201) 949-3000

9. INFORMATION DISTRIBUTION ELEMENTS

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Shearman, Elton	Communications Systems	General Automation	Aneheim, California	(N/A)
Stearns, Robert W.	Multiplexing	Codex Corporation	15 Riverdale Avenue Newton, Massachusetts 02195	(617) 969-0600
Stockford, J. A.	Telecommunications Engineering Digital (Radio) Transmission	Cushman Electronics, Inc.	830 Stewart Drive Sunnyvale, California 94086	(408) 739-6760
Takeuchi, Miki	Digital Communications Systems	Marubeni Corporation	Tokyo, Japan	(N/A)
von Roesgen, C. A.	Digital Communications Systems	Bell Laboratories	Box 400 Holmdel, New Jersey 07733	(201) 949-3000
Waldhauer, F. O.	Digital Communications Systems	Bell Laboratories	Box 400 Holmdel, New Jersey 07733	(201) 949-3000
Weisbart, Martin	Digital Communications Systems	ITT World Communications	320 Park Avenue New York, New York 10022	(212) 752-6000

10. INFORMATION PRESENTATION ELEMENTS

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NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Adams, James E.	Liquid Crystal Image Storage Devices	Xerox Corporation	Webster Research Center 800 Phillips Road Webster, New York 14580	(716) 422-1000
Atkins, John O.	Transparent Plasma Graphics Panels	Control Data Corporation	8100 34th Avenue Minneapolis, Minnesota 55440	(612) 853-8100
Brody, T. P.	Electroluminescent Displays	Westinghouse Research Laboratories	Stanwix Street & Ft. Pitt Pittsburgh, Pennsylvania 15222	(412) 255-3800
Carl, William L.	Liquid Crystal Displays	Integrated Display Systems, Inc.	Montgomeryville, Pennsylvania	(N/A)
Channin, Donald J.	Liquid Crystal Displays	RCA Laboratories	Sarnoff Research Center Princeton, New Jersey 08540	(N/A)
Clemens, Jon K.	Video Discs	RCA Laboratories	Sarnoff Research Center Princeton, New Jersey 08540	(N/A)
Cribbs, Alan C.	AC Plasma Panel Displays	Owens-Illinois, Inc.	Toledo, Ohio 43666	(419) 242-6543
Davies, D. H.	Electroluminescent Displays	Westinghouse Research Laboratories	Stanwix Street & Ft. Pitt Pittsburgh, Pennsylvania 15222	(412) 255-3800

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Dir, Gary A.	Liquid Crystal Image Storage Devices	Xerox Corporation	Webster Research Center 800 Phillips Road Webster, New York 14580	(716) 422-1000
Frescura, Bert L.	Light Emitting Diode Displays	Hewlett-Packard Laboratories	1501 Page Mill Road Palo Alto, California 94304	(415) 493-1501
Haflinger, Dan J.	CRT Displays	Stromberg Data Graphix, Inc.	San Diego, California	(N/A)
Henrion, Widge S.	Thermal Printing	Texas Instruments, Inc.	3939 Ann Arbor Drive Houston, Texas 77042	(713) 785-4800
Lee, Lawrence L.	Magnetic Particle Displays	Magnavox Company	1700 Magnavox Way Fort Wayne, Indiana 46804	(219) 432-6511
Luo, F. C.	Electroluminescent Displays	Westinghouse Research	Stanwix Street & Ft. Pitt. Pittsburgh, Pennsylvania 15222	(412) 255-3800
Miller, John W. V.	AC Plasma Panel Displays	Owens-Illinois, Inc.	P. O. Box 1035 Toledo, Ohio 43666	(419) 242-6543
Myers, Robert A.	Computer Output Printing	IBM Thomas Watson Research Center	Box 218 Yorktown Heights, New York 10598	(914) 945-3000

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NAME	AREAS OF SPECIALIATION	ORGANIZATION	ADDRESS	TELEPHONE
Newman, W. M.	Graphic Displays	Xerox	Palo Alto Research Center 3333 Cayote Hill Road Palo Alto, California 94303	(415) 494-4368
Ngo, Peter	AC Plasma Panel Displays	Bell Laboratories	Box 400 Holmdel, New Jersey 07733	(201) 949-3000
Pennebaker	Ink Jet Printing	IBM Thomas J. Watson Research Center	Box 218 Yorktown Heights, New York 10598	(914) 945-3000
Pressman, Gerald L.	Electrostatic Printing	Electroprint, Inc.	Cupertino, California	(N/A)
Schermerhorn, Jerry D.	AC Plasma Panel Displays	Owens-Illinois, Inc.	P. O. Box 1035 Toledo, Ohio 43666	(419) 242-6543
Schulman, Ronald	Cathodeluminescent Displays	Zenith Radio Corporation	Niles, Illinois	(N/A)
Schwartz, James W.	Cathode Ray Tube Devices	Zenith Radio Corporation	1000 Milwaukee Avenue Glenview, Illinois 60025	(312) 391-7000
Sobel, Alan	Flat-Panel Displays	Zenith Radio Corporation	1000 Milwaukee Avenue Glenview, Illinois 60025	(312) 391-7000

NAME	AREAS OF SPECIALIZATION	ORGANIZATION	ADDRESS	TELEPHONE
Stein, Charles R.	Liquid Crystal Displays	General Electric Company	CR & D Schenectady, New York 12301	(518) 385-2211
Szepesi, Z. P.	Electroluminescent Displays	Westinghouse Research Laboratories	Stanwix Street & Ft. Pitt Pittsburgh, Pennsylvania 15222	(412) 255-3800
Thoman, Richard E.	Large Screen CRT Projector	General Dynamics Corporation	P. O. Box 81127 San Diego, California 92112	(714) 279-7301
True, Thomas T.	Display Systems Projection Television	General Electric Company	Building 5-RM 318 Electronics Park Syracuse, New York 13201	(315) 456-2951
Veron, Harry	Large Screen CRT Projectors	The Mitre Corporation	Bedford, Massachusetts	(N/A)
Weber, L. F.	Plasma Display Devices	University of Illinois	Urbana, Illinois 61801	(N/A)
Welkart, G. S.	Plasma Display Devices	University of Illinois	Urbana, Illinois 61801	(N/A)
Wileman, Roger A.	Large Screen CRT Projectors	General Dynamics Corporation	P. O. Box 81127 San Diego, California 92112	(714) 279-7301